Summary ~~O. nr. E 13117~~

Method for solving the classical inversion problem of finding the angle dependent reflection coefficients along selected reflectors in the subsurface. The input data to the method include seismic constant offset or constant angle data cubes from Pre-Stack Depth Migration of Kirchhoff type and the corresponding reflectors and velocities from the interpretation and velocity analysis of the data. One or more of the reflectors are chosen and ray modeling is done to create synthetic seismics for all shot/receiver pairs in the seismic survey. Based on these modeling results, amplitude correction maps are made for the various reflection angles. These correction maps are applied to the amplitudes from the seismic data. The corrected amplitudes are approximations to the angle-dependent reflection coefficients in all points on each selected reflector. For each point, a weight function is computed, giving the quantitative resolution of the estimate of the reflection coefficient.